General

Guideline Title

Practice guidelines for acute pain management in the perioperative setting. An updated report by the American Society of Anesthesiologists Task Force on Acute Pain Management.

Bibliographic Source(s)

Practice guidelines for acute pain management in the perioperative setting: an updated report by the American Society of Anesthesiologists Task Force on Acute Pain Management. Anesthesiology. 2012 Feb;116(2):248-73. [242 references] PubMed

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: American Society of Anesthesiologists Task Force on Acute Pain Management. Practice guidelines for acute pain management in the perioperative setting: an updated report by the American Society of Anesthesiologists Task Force on Acute Pain Management. Anesthesiology 2004 Jun;100(6):1573-81.

Regulatory Alert

FDA Warning/Regulatory Alert

Note from the National Guideline Clearinghouse: This guideline references a drug(s) for which important revised regulatory and/or warning information has been released.

- December 14, 2016 – General anesthetic and sedation drugs: The U.S. Food and Drug Administration (FDA) is warning that repeated or lengthy use of general anesthetic and sedation drugs during surgeries or procedures in children younger than 3 years or in pregnant women during their third trimester may affect the development of children's brains. Consistent with animal studies, recent human studies suggest that a single, relatively short exposure to general anesthetic and sedation drugs in infants or toddlers is unlikely to have negative effects on behavior or learning. However, further research is needed to fully characterize how early life anesthetic exposure affects children's brain development.
- August 31, 2016 – Opioid pain and cough medicines combined with benzodiazepines: A U.S. Food and Drug Administration (FDA) review has found that the growing combined used of opioid medicines with benzodiazepines or other drugs that depress the central nervous system (CNS) has resulted in serious side effects, including slowed or difficult breathing and deaths. FDA is adding Boxed Warnings to the drug labeling of prescription opioid pain and prescription opioid cough medicines and benzodiazepines.
- March 22, 2016 – Opioid pain medicines: The U.S. Food and Drug Administration (FDA) is warning about several safety issues with the entire class of opioid pain medicines. These safety risks are potentially harmful interactions with numerous other medications, problems with the adrenal glands, and decreased sex hormone levels. They are requiring changes to the labels of all opioid

drugs to warn about these risks.

Recommendations

Major Recommendations

I. Institutional Policies and Procedures for Providing Perioperative Pain Management
- Anesthesiologists offering perioperative analgesia services should provide, in collaboration with other healthcare professionals as appropriate, ongoing education and training to ensure that hospital personnel are knowledgeable and skilled with regard to the effective and safe use of the available treatment options within the institution.
  - Educational content should range from basic bedside pain assessment to sophisticated pain management techniques (e.g., epidural analgesia, patient-controlled analgesia (PCA), and various regional anesthesia techniques) and nonpharmacologic techniques (e.g., relaxation, imagery, hypnotic methods).
  - For optimal pain management, ongoing education and training are essential for new personnel, to maintain skills, and whenever therapeutic approaches are modified.
- Anesthesiologists and other healthcare providers should use standardized, validated instruments to facilitate the regular evaluation and documentation of pain intensity, the effects of pain therapy, and side effects caused by the therapy.
- Anesthesiologists responsible for perioperative analgesia should be available *at all times* to consult with ward nurses, surgeons, or other involved physicians.
  - They should assist in evaluating patients who are experiencing problems with any aspect of perioperative pain relief.
- Anesthesiologists providing perioperative analgesia services should do so within the framework of an Acute Pain Service.
  - They should participate in developing standardized institutional policies and procedures.

II. Preoperative Evaluation of the Patient
- A directed pain history, a directed physical examination, and a pain control plan should be included in the anesthetic preoperative evaluation.

III. Preoperative Preparation of the Patient
- Patient preparation for perioperative pain management should include appropriate adjustments or continuation of medications to avert an abstinence syndrome, treatment of preexistent pain, or preoperative initiation of therapy for postoperative pain management.
- Anesthesiologists offering perioperative analgesia services should provide, in collaboration with others as appropriate, patient and family education regarding their important roles in achieving comfort, reporting pain, and in proper use of the recommended analgesic methods.
  - Common misconceptions that overestimate the risk of adverse effects and addiction should be dispelled.
  - Patient education for optimal use of PCA and other sophisticated methods, such as patient-controlled epidural analgesia, might include discussion of these analgesic methods at the time of the preanesthetic evaluation, brochures and videotapes to educate patients about therapeutic options, and discussion at the bedside during postoperative visits.
  - Such education may also include instruction in behavioral modalities for control of pain and anxiety.

IV. Perioperative Techniques for Pain Management
- Anesthesiologists who manage perioperative pain should use therapeutic options such as epidural or intrathecal opioids, systemic opioid PCA, and regional techniques after thoughtfully considering the risks and benefits for the individual patient.
  - These modalities should be used in preference to intramuscular opioids ordered "as needed."
- The therapy selected should reflect the individual anesthesiologist's expertise, as well as the capacity for safe application of the modality in each practice setting.
  - This capacity includes the ability to recognize and treat adverse effects that emerge after initiation of therapy.
- Special caution should be taken when continuous infusion modalities are used because drug accumulation may contribute to adverse events.

V. Multimodal Techniques for Pain Management
- Whenever possible, anesthesiologists should use multimodal pain management therapy.
  - Unless contraindicated, patients should receive an around-the-clock regimen of nonsteroidal anti-inflammatory drugs (NSAIDs), cyclo-oxygenase-2 selective NSAIDs (COXIBs), or acetaminophen.
  - Regional blockade with local anesthetics should be considered.
- Dosing regimens should be administered to optimize efficacy while minimizing the risk of adverse events.
- The choice of medication, dose, route, and duration of therapy should be individualized.

VI. Patient Subpopulations

- Pediatric patients
  - Aggressive and proactive pain management is necessary to overcome the historic undertreatment of pain in children.
  - Perioperative care for children undergoing painful procedures or surgery requires developmentally appropriate pain assessment and therapy.
  - Analgesic therapy should depend upon age, weight, and comorbidity, and unless contraindicated should involve a multimodal approach.
  - Behavioral techniques, especially important in addressing the emotional component of pain, should be applied whenever feasible.
  - Sedative, analgesic, and local anesthetics are all important components of appropriate analgesic regimens for painful procedures.
  - Because many analgesic medications are synergistic with sedating agents, it is imperative that appropriate monitoring be used during the procedure and recovery.
- Geriatric patients
  - Pain assessment and therapy should be integrated into the perioperative care of geriatric patients.
  - Pain assessment tools appropriate to a patient's cognitive abilities should be used. Extensive and proactive evaluation and questioning may be necessary to overcome barriers that hinder communication regarding unrelieved pain.
  - Anesthesiologists should recognize that geriatric patients may respond differently than younger patients to pain and analgesic medications, often because of comorbidity.
  - Vigilant dose titration is necessary to ensure adequate treatment while avoiding adverse effects such as somnolence in this vulnerable group, who are often taking other medications (including alternative and complementary agents).
- Other subpopulations
  - Anesthesiologists should recognize that patients who are critically ill, cognitively impaired, or have communication difficulties may require additional interventions to ensure optimal perioperative pain management.
  - Anesthesiologists should consider a therapeutic trial of an analgesic in patients with increased blood pressure and heart rate or agitated behavior when causes other than pain have been excluded.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Acute perioperative pain

Guideline Category

Management

Prevention

Treatment

Clinical Specialty

Anesthesiology

Family Practice

Geriatrics

Internal Medicine

Pediatrics

Surgery

Intended Users

Advanced Practice Nurses

Health Care Providers

Nurses

Physician Assistants

Physicians

Guideline Objective(s)

- To (1) facilitate the safety and effectiveness of acute pain management in the perioperative setting; (2) reduce the risk of adverse outcomes; (3) maintain the patient's functional abilities, as well as physical and psychological well-being; and (4) enhance the quality of life for patients with acute pain during the perioperative period
- To update the "Practice Guidelines for Acute Pain Management in the Perioperative Setting," adopted by the American Society of Anesthesiologists in 2003 and published in 2004

Target Population

Adult (including geriatric) and pediatric patients undergoing either inpatient or outpatient surgery

Note: These guidelines do not apply to the following populations:

Patients with severe or concurrent medical illness such as sickle cell crisis, pancreatitis, or acute pain related to cancer or cancer treatment
Patients with labor pain

Interventions and Practices Considered

1. Development of institutional policies and procedures for perioperative pain management
    - Education and training of healthcare providers and patients
    - Monitoring and documentation of data
    - Monitoring of institutional patient outcomes
    - Availability (24 hours) of anesthesiologists
    - Use of dedicated acute pain service
2. Preoperative patient evaluation
    - Pain history
    - Physical exam
    - Development of a pain control plan
3. Preoperative preparation
    - Adjustments and/or continuation of medications
    - Treatments to reduce preexisting pain and anxiety
    - Premedications as part of a multimodal analgesic pain management program
    - Patient/family education including behavioral pain control techniques
4. Perioperative pain management
    - Epidural or intrathecal opioid analgesia (morphine, fentanyl)
    - Patient-controlled analgesia with systemic opioids (morphine)

    - Regional techniques (peripheral nerve blocks, postincisional infiltration with local anesthetics)
5. Multimodal techniques for pain management
    - Oral opioids combined with nonsteroidal anti-inflammatory drugs (NSAIDs), cyclooxygenase-2 inhibitors (COXIBs), or acetaminophen
    - Regional blockade with local anesthetics
    - Individualized pain control regimens
6. Special considerations for patient subpopulations
    - Care of pediatric patients
    - Care of geriatric patients
    - Care of other patient groups (patients who are critically ill, cognitively impaired (e.g., Alzheimer's disease), or who otherwise have difficulty communicating (e.g., cultural or language barriers)

Major Outcomes Considered

- Pain level
- Adverse effects of pain therapy
- Rate of analgesic use
- Time to discharge
- Anxiety

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Availability and Strength of Evidence

Preparation of these Guidelines followed a rigorous methodological process. Evidence was obtained from two principal sources: scientific evidence and opinion-based evidence.

State of the Literature

For these updated Guidelines, a review of studies used in the development of the original Guidelines was combined with studies published subsequent to approval of the original Guidelines in 2003. The scientific assessment of these Guidelines was based on evidence linkages or statements regarding potential relationships between clinical interventions and outcomes. The interventions listed below were examined to assess their relationship to a variety of outcomes related to the management of acute pain in the perioperative setting.

Institutional Policies and Procedures for Providing Perioperative Pain Management

- Education and training of healthcare providers
- Monitoring of patient outcomes
- Documentation of monitoring activities
- Monitoring of outcomes at an institutional level
- 24-h availability of anesthesiologists providing perioperative pain management
- Acute pain service

Preoperative Evaluation of the Patient

- A directed pain history (e.g., medical record review and patient interview to include current medications, adverse effects, preexisting pain conditions, medical conditions that would influence a pain therapy, nonpharmacologic pain therapies, alternative and complementary therapies)
- A directed physical examination
- Consultations with other healthcare providers (e.g., nurses, surgeons, pharmacists)

Preoperative Preparation of the Patient

- Preoperative adjustment or continuation of medications whose sudden cessation may provoke an abstinence syndrome
- Preoperative treatment(s) to reduce preexisting pain and anxiety
- Premedication(s) before surgery as part of a multimodal analgesic pain management program
- Patient and family education

Perioperative Techniques for Pain Management

- Epidural or intrathecal analgesia with opioids (vs. epidural placebo, epidural local anesthetics, or intravenous [IV], intramuscular, or oral opioids)
- Patient-controlled analgesia with opioids:
  - IV patient-controlled analgesia [PCA] versus nurse-controlled or continuous IV
  - IV PCA versus intramuscular
  - Epidural PCA versus epidural bolus or infusion
  - Epidural PCA versus IV PCA
  - IV PCA with background infusion of opioids versus no background infusion
- Regional analgesia with local anesthetics or opioids
  - Intercostal or interpleural blocks
  - Plexus and other blocks
  - Intraarticular opioids, local anesthetics or combinations
  - Infiltration of incisions

Multimodal Techniques (Epidural, IV, or Regional Techniques)

- Two or more analgesic agents, one route versus a single agent, one route
  - Epidural or intrathecal analgesia with opioids combined with:
    - Local anesthetics versus epidural opioids
    - Local anesthetics versus epidural local anesthetics
    - Clonidine versus epidural opioids
  - IV opioids combined with:
    - Clonidine versus IV opioids
    - Ketorolac versus IV opioids
    - Ketamine versus IV opioids
  - Oral opioids combined with non-steroidal antiinflammatory drugs (NSAIDs), COX-2 selective NSAIDs (COXIBs), or acetaminophen versus oral opioids
- Two or more drug delivery routes versus a single route
  - Epidural or intrathecal analgesia with opioids combined with IV, intramuscular, oral, transdermal, or subcutaneous analgesics versus epidural opioids
  - IV opioids combined with oral NSAIDs, COXIBs, or acetaminophen versus IV opioids
  - Nonpharmacologic, alternative, or complementary pain management combined with pharmacologic pain management versus pharmacologic pain management

Special Patient Populations

- Pain management techniques for pediatric patients
  - Pain assessment techniques
  - Dose level adjustments
  - Avoidance of repetitive diagnostic evaluation (heel sticks) for neonates
- Pain management techniques for geriatric patients
  - Pain assessment techniques

    - Dose level adjustments
- Pain management techniques for other special populations (e.g., cognitively impaired, critically ill, patients with difficulty communicating)
    - Pain assessment methods specific to special populations
    - Pain management techniques specific to special populations

For the literature review, potentially relevant clinical studies were identified via electronic and manual searches of the literature. The electronic and manual searches covered a 49-yr period from 1963 through 2011. The principal source of citations was PubMed, although citations were also obtained from the Cochrane database, direct internet searches, task force members, liaisons from other organizations, and from hand searches of references located in reviewed articles. More than 2,000 citations were identified initially, yielding a total of 1,784 nonoverlapping articles that addressed topics related to the evidence linkages. After the articles were reviewed, 1,153 studies did not provide direct evidence and were eliminated subsequently. A total of 631 articles contained direct linkage-related evidence. A complete bibliography used to develop these Guidelines, organized by section, is available as Supplemental Digital Content 2, http://links.lww.com/ALN/A781 .

Number of Source Documents

A total of 631 articles contained direct linkage-related evidence.

Methods Used to Assess the Quality and Strength of the Evidence

Expert Consensus

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Scientific Evidence

Study findings from published scientific literature were aggregated and are reported in summary form by evidence category, as described below. All literature (e.g., randomized controlled trials [RCTs], observational studies, case reports) relevant to each topic was considered when evaluating the findings. However, for reporting purposes in this document, only the highest level of evidence (i.e., level 1, 2, or 3 within category A, B, or C, as identified below) is included in the summary.

Category A: Supportive Literature

Randomized controlled trials report statistically significant ($P<0.01$) differences between clinical interventions for a specified clinical outcome.

Level 1: The literature contains multiple RCTs, and aggregated findings are supported by meta-analysis.‡

Level 2: The literature contains multiple RCTs, but the number of studies is insufficient to conduct a viable meta-analysis for the purpose of these Guidelines.

Level 3: The literature contains a single randomized controlled trial.

Category B: Suggestive Literature

Information from observational studies permits inference of beneficial or harmful relationships among clinical interventions and clinical outcomes.

Level 1: The literature contains observational comparisons (e.g., cohort, case-control research designs) of clinical interventions or conditions and indicates statistically significant differences between clinical interventions for a specified clinical outcome.

Level 2: The literature contains noncomparative observational studies with associative (e.g., relative risk, correlation) or descriptive statistics.

Level 3: The literature contains case reports.

Category C: Equivocal Literature

The literature cannot determine whether there are beneficial or harmful relationships among clinical interventions and clinical outcomes.

Level 1: Meta-analysis did not find significant differences ($P>0.01$) among groups or conditions.

Level 2: The number of studies is insufficient to conduct meta-analysis, and (1) RCTs have not found significant differences among groups or conditions or (2) RCTs report inconsistent findings.

Level 3: Observational studies report inconsistent findings or do not permit inference of beneficial or harmful relationships.

Category D: Insufficient Evidence from Literature

The *lack* of scientific evidence in the literature is described by the following terms.

Inadequate: The available literature cannot be used to assess relationships among clinical interventions and clinical outcomes. The literature either does not meet the criteria for content as defined in the "Focus" of the Guidelines or does not permit a clear interpretation of findings due to methodological concerns (e.g., confounding in study design or implementation).

Silent: No identified studies address the specified relationships among interventions and outcomes.

Opinion-based Evidence

All opinion-based evidence (e.g., survey data, open-forum testimony, Internet-based comments, letters, editorials) relevant to each topic was considered in the development of these updated Guidelines. However, only the findings obtained from formal surveys are reported.

Opinion surveys were developed for this update by the Task Force to address each clinical intervention identified in the document. Identical surveys were distributed to expert consultants and American Society of Anesthesiology (ASA) members.

Category A: Expert Opinion

Survey responses from Task Force-appointed expert consultants are reported in summary form in the text of the original guideline document, with a complete listing of consultant survey responses reported in Appendix 2 of the original guideline document.

Category B: Membership Opinion

Survey responses from active ASA members are reported in summary form in the text of the original guideline document, with a complete listing of ASA member survey responses reported in Appendix 2 of the original guideline document.

Opinion survey responses are recorded using a 5-point scale and summarized based on median values.[§]

Strongly Agree: Median score of 5 (at least 50% of the responses are 5)

Agree: Median score of 4 (at least 50% of the responses are 4 and 5)

Equivocal: Median score of 3 (at least 50% of the responses are 3, or no other response category or combination of similar categories contain at least 50% of the responses)

Disagree: Median score of 2 (at least 50% of responses are 2 or 1 and 2)

Strongly Disagree: Median score of 1 (at least 50% of responses are 1)

Category C: Informal Opinion

Open-forum testimony from the previous update, Internet-based comments, letters, and editorials are all informally evaluated and discussed during the development of Guideline recommendations. When warranted, the Task Force may add educational information or cautionary notes based on this information.

‡All meta-analyses are conducted by the American Society of Anesthesiologists methodology group. Meta-analyses from other sources are reviewed but not included as evidence in this document.

[§]When an equal number of categorically distinct responses are obtained, the median value is determined by calculating the arithmetic mean of the two middle values. Ties are calculated by a predetermined formula.

Methods Used to Analyze the Evidence

Meta-Analysis

Other

Systematic Review

Description of the Methods Used to Analyze the Evidence

State of the Literature

Initially, each pertinent outcome reported in a study was classified as supporting an evidence linkage, refuting a linkage, or equivocal. The results were then summarized to obtain a directional assessment for each evidence linkage before conducting formal meta-analyses. Literature pertaining to four evidence linkage categories contained enough studies with well-defined experimental designs and statistical information sufficient for meta-analyses (see Table 1 in the original guideline document). These linkages were: (1) epidural or intrathecal opioids, (2) patient-controlled analgesia, (3) regional analgesia, and (4) two or more anesthetic drugs versus a single drug.

General variance-based, effect-size estimates or combined probability tests were obtained for continuous outcome measures, and Mantel-Haenszel odds ratios were obtained for dichotomous outcome measures. Two combined probability tests were used as follows: (1) the Fisher combined test, producing chi-square values based on logarithmic transformations of the reported *P* values from the independent studies, and (2) the Stouffer combined test, providing weighted representation of the studies by weighting each of the standard normal deviates by the size of the sample. An odds ratio procedure based on the Mantel-Haenszel method for combining study results using 2 x 2 tables was used with outcome frequency information. An acceptable significance level was set at $P<0.01$ (one-tailed). Tests for heterogeneity of the independent studies were conducted to assure consistency among the study results. DerSimonian-Laird random-effects odds ratios were obtained when significant heterogeneity was found ($P<0.01$). To control for potential publishing bias, a "fail-safe n" value was calculated. No search for unpublished studies was conducted, and no reliability tests for locating research results were done. To be accepted as significant findings, Mantel-Haenszel odds ratios must agree with combined test results whenever both types of data are assessed. In the absence of Mantel-Haenszel odds ratios, findings from both the Fisher and weighted Stouffer combined tests must agree with each other to be acceptable as significant.

For the previous update of the Guidelines, interobserver agreement among Task Force members and two methodologists was established by interrater reliability testing. Agreement levels using a kappa (k) statistic for two-rater agreement pairs were as follows: (1) type of study design, $\kappa = 0.63–0.94$; (2) type of analysis, $\kappa = 0.39–0.89$; (3) evidence linkage assignment, $\kappa = 0.74–0.96$; and (4) literature inclusion for database, $\kappa = 0.75–0.88$. Three-rater chance-corrected agreement values were: (1) study design, Sav = 0.80, Var (Sav) = 0.007; (2) type of analysis, Sav = 0.59, Var (Sav) = 0.032; (3) linkage assignment, Sav = 0.73 Var (Sav) = 0.010; (4) literature database inclusion, Sav = 0.83 Var (Sav) = 0.015. These values represent moderate levels of agreement. For the updated Guidelines, the same two methodologists involved in the original Guidelines conducted the literature review.

The findings of the literature analyses were supplemented by the opinions of Task Force members after considering opinions derived from a variety of sources, including informal commentary and comments from postings of the draft document on the American Society of Anesthesiology (ASA) web site. In addition, opinions obtained from consultant surveys, open forum commentary, and other sources used in the original Guidelines were reviewed and considered.

Consensus-Based Evidence

Consensus was obtained from multiple sources, including (1) survey opinion from consultants who were selected based on their knowledge or expertise in acute pain management, (2) survey opinions solicited from active members of the ASA, (3) testimony from attendees of a publicly held open forum at a national anesthesia meeting (original Guidelines only), (4) Internet commentary, and (5) Task Force opinion and interpretation. The survey rate of return was 62% (n = 53 of 85) for the consultants (see Table 2 of the original guideline document), and 268 surveys were received from active ASA members (see Table 3 of the original guideline document).

For the previous update of the Guidelines, an additional survey was sent to the expert consultants asking them to indicate which, if any, of the evidence linkages would change their clinical practices if the Guidelines were instituted. The rate of return was 70.1% (n = 61 of 87). The percentages of responding consultants expecting *no change* associated with each linkage were as follows: (1) proactive planning 82.0%, (2) education and training 88.5%, (3) education or participation of patient and family 80.3%, (4) monitoring or documentation 77.0%, (5) availability of anesthesiologists 90.2%, (6) institutional protocols 86.9%, (7) use of patient-controlled analgesia (PCA), epidural, or regional techniques 90.2%, (8) use of multimodality techniques 88.5%, (9) organizational characteristics 90.2%, (10) pediatric techniques 95.1%, (11) geriatric techniques 91.8%, and (12) ambulatory surgery techniques 85.2%.

Sixty-five percent of the respondents indicated that the Guidelines would have *no effect* on the amount of time spent on a typical case, and 24% indicated that there would be an increase of the amount of time spent on a typical case with the implementation of these Guidelines (mean time

increase = 3.4 min). Eighty-nine percent indicated that new equipment, supplies, or training would *not* be needed to implement the Guidelines, and 92% indicated that implementation of the Guidelines would *not* require changes in practice that would affect costs.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Task Force Members and Consultants

The original Guidelines were developed by an American Society of Anesthesiology (ASA) appointed task force of 11 members, consisting of anesthesiologists in private and academic practices from various geographic areas of the United States, and two consulting methodologists from the ASA Committee on Standards and Practice Parameters.

The Task Force updated the Guidelines by means of a seven-step process. First, they reached consensus on the criteria for evidence. Second, original published research studies from peer-reviewed journals relevant to acute pain management were reviewed and evaluated. Third, expert consultants were asked to: (1) participate in opinion surveys on the effectiveness of various acute pain management recommendations and (2) review and comment on a draft of the updated Guidelines. Fourth, opinions about the updated Guideline recommendations were solicited from a sample of active members of the ASA. Fifth, opinion-based information obtained during an open forum for the original Guidelines, held at a major national meeting,† was reexamined. Sixth, the consultants were surveyed to assess their opinions on the feasibility of implementing the updated Guidelines. Seventh, all available information was used to build consensus to finalize the updated Guidelines.

†International Anesthesia Research Society, 68th Clinical and Scientific Congress, Orlando, Florida, March 6, 1994.

Rating Scheme for the Strength of the Recommendations

Not applicable

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

Expert consultants were asked to: (1) participate in opinion surveys on the effectiveness of various acute pain management recommendations and (2) review and comment on a draft of the updated Guidelines. Opinions about the updated Guideline recommendations were solicited from a sample of active members of the American Society of Anesthesiologists (ASA). Additional opinions about the updated Guideline recommendations were solicited from a sample of active members of the ASA.

Opinion-based information obtained during an open forum for the original Guidelines, held at a major national meeting, was reexamined. The consultants were surveyed to assess their opinions on the feasibility of implementing the updated Guidelines. All available information was used to build consensus to finalize the updated Guidelines.

The Guidelines were approved by the ASA House of Delegates on October 19, 2011.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

Evidence was obtained from two principal sources: scientific evidence and opinion-based evidence.

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Optimal acute pain management in the perioperative setting

Potential Harms

- Analgesic techniques involve risk for adverse effects that may require prompt medical evaluation.
- The consultants and American Society of Anesthesiology members strongly agree that special caution should be taken when continuous infusion modalities are used, as drug accumulation may contribute to adverse events.
- Vigilant dose titration is necessary to ensure adequate treatment while avoiding adverse effects such as somnolence in geriatric patients.
- Adverse outcomes associated with the management of perioperative pain include (but are not limited to) respiratory depression, brain or other neurologic injury, sedation, circulatory depression, nausea, vomiting, pruritus, urinary retention, impairment of bowel function, and sleep disruption.

Qualifying Statements

Qualifying Statements

- Practice guidelines are systematically developed recommendations that assist the practitioner and patient in making decisions about health care. These recommendations may be adopted, modified, or rejected according to clinical needs and constraints and are not intended to replace local institutional policies.
- In addition, Practice Guidelines developed by the American Society of Anesthesiologists are not intended as standards or absolute requirements, and their use cannot guarantee any specific outcome. They provide basic recommendations that are supported by a synthesis and analysis of the current literature, expert and practitioner opinion, open forum commentary, and clinical feasibility data.
- Modalities for perioperative pain management addressed in these Guidelines require a higher level of professional expertise and organizational structure than "as needed" intramuscular or intravenous injections of opioid analgesics. These Guidelines are not intended as an exhaustive compendium of specific techniques.
- Although patients undergoing painful procedures may benefit from the appropriate use of anxiolytics and sedatives in combination with analgesics and local anesthetics when indicated, these Guidelines do not specifically address the use of anxiolysis or sedation during such procedures.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Resources

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Safety

Identifying Information and Availability

Bibliographic Source(s)

Practice guidelines for acute pain management in the perioperative setting: an updated report by the American Society of Anesthesiologists Task Force on Acute Pain Management. Anesthesiology. 2012 Feb;116(2):248-73. [242 references] PubMed

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2012 Feb

Guideline Developer(s)

American Society of Anesthesiologists - Medical Specialty Society

Source(s) of Funding

American Society of Anesthesiologists

Guideline Committee

Committee on Standards and Practice Parameters

Composition of Group That Authored the Guideline

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Financial Disclosures/Conflicts of Interest

Not stated

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: American Society of Anesthesiologists Task Force on Acute Pain Management. Practice guidelines for acute pain management in the perioperative setting: an updated report by the American Society of Anesthesiologists Task Force on Acute Pain Management. Anesthesiology 2004 Jun;100(6):1573-81.

Guideline Availability

Electronic copies: Available in Portable Document Format (PDF) and EPUB for eBook devices from the Anesthesiology Journal Web site .

Print copies: Available from the American Society for Anesthesiologists, 520 North Northwest Highway, Park Ridge, IL 60068-2573.

Availability of Companion Documents

None available

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI on July 13, 2005. The information was verified by the guideline developer on July 20, 2005. This NGC summary was updated by ECRI Institute on March 30, 2012. This summary was updated by ECRI Institute on October 28, 2013 following the U.S. Food and Drug Administration advisory on Acetaminophen. This summary was updated by ECRI Institute on September 18, 2015 following the U.S. Food and Drug Administration advisory on non-aspirin nonsteroidal anti-inflammatory drugs (NSAIDs). This summary was updated by ECRI Institute on June 2, 2016 following the U.S. Food and Drug Administration advisory on opioid pain medicines. This summary was updated by ECRI Institute on October 21, 2016 following the U.S. Food and Drug Administration advisory on opioid pain and cough medicines combined with benzodiazepines. This summary was updated by ECRI Institute on February 15, 2017 following the U.S. Food and Drug Administration advisory on general anesthetic and sedation drugs.

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